

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
16 May 2002 (16.05.2002)

PCT

(10) International Publication Number  
**WO 02/39361 A2**

(51) International Patent Classification<sup>7</sup>: **G06F 17/60**

WENNINGER, Lisa; 288 W. 92nd Street #2B, New York, NY 10025 (US). HABIB, Warren; 135 W. 79th Street 2A, New York, NY 10024 (US). KAMDAR, Ajay; 24 Treeview Circle, Scotch Plains, NJ 07076 (US).

(21) International Application Number: **PCT/US01/46801**  
(22) International Filing Date:  
8 November 2001 (08.11.2001)

(74) Agents: **KALOW, David, A. et al.**; Kalow & Springut, 488 Madison Avenue, 19th floor, New York, NY 10020 (US).

(25) Filing Language: English

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

(26) Publication Language: English  
(30) Priority Data:  
09/710,039 8 November 2000 (08.11.2000) US

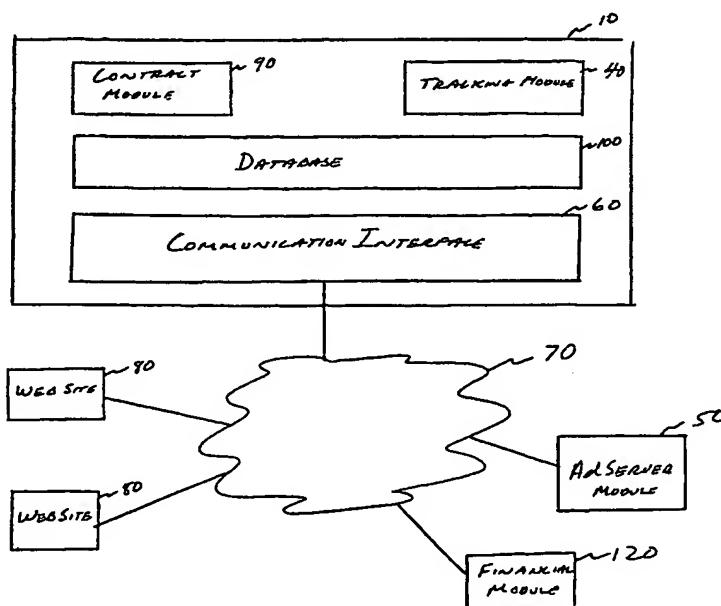
(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant: **SOLBRIGHT, INC.** [US/US]; 48 West 37th Street, 12th floor, New York, NY 10018 (US).

(72) Inventors: **COMPTON, Anthony, Key**; One Irving Place #V-11-I, New York, NY 10010 (US). **GLUCK, Gary, Stephen**; 20 W. 84th Street, New York, NY 10024 (US). **BARTLETT, Jonathan, Reid**; 305 E. 92nd Street, Apt. 5D, New York, NY 10128 (US). **WESTEN, Tamara, Lee**; 13 Madison Avenue, Maplewood, NJ 07040 (US).

[Continued on next page]

(54) Title: METHOD AND SYSTEM FOR TRACKING REVENUE OF ONLINE ADVERTISING



**WO 02/39361 A2**

(57) Abstract: A system for automating the processes of monitoring contract terms, billing methods, and campaign delivery and performance, in order to track and calculate recognized, actual, and deferred revenue at various times during an online advertising campaign. The system also automates advertiser billing workflow through system initiated scheduled billing, discrepancy reporting and resolution, data exporting, and revenue reporting. The system accepts terms of a contract and advertisement performance data, and tracks and calculates revenue based upon the terms of the contract and the performance data.

**BEST AVAILABLE COPY**



**Published:**

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

## 5 Method And System For Tracking Revenue Of Online Advertising

Background of the Invention:

This invention relates to tracking performance of online advertising.

Traditional advertising is bought and sold using audience and delivery estimates (e.g. newspaper circulation numbers). Online advertising is different from "traditional"

10 advertising in that advertising campaigns can be bought and sold on exact, performance-based metrics, such as per advertisement view or "impression", per click, or other viewer action.

Under standard online industry practices, the revenue from performance-based advertising campaigns cannot be recognized until the contractual commitments have 15 been satisfied. Other contracts for online advertising are sold as flat-fee sponsorships running for a specified period of time. Revenue for these contracts can be recognized only when the campaign has gone "live" and the contracted time period has passed. In short, the revenue from these contracts is deferred until the terms of the contract are satisfied.

20 Because delivery of Internet advertising can be exactly monitored, processes for determining revenue to satisfy standard accounting principles have been used, which differ from traditional advertising businesses. One such process is recognizing revenue upon delivery of campaigns sold and delivered as guaranteed quantities (e.g. ad impressions and clicks). If payment is made in advance for the campaign, the 25 payment is logged as deferred revenue and not recognized until delivery of the campaign. Revenue for campaigns delivered within a set time frame, rather than as quantity goals, can be recognized when the time period passes. What is needed is a method and system that tracks performance of online advertising.

30 Brief Description Of The Drawings

FIG. 1 presents a illustrative system diagram through which benefits taught from the principles disclosed herein can be obtained; and

FIG. 2 presents a flowchart depicting an illustrative process that is carried out in tracking module 40 of FIG. 1.

35

Summary of the Invention

A server having a contract module for capturing terms of a contract, a database for storing the terms of the contract and performance data, and

5 a tracking module for calculating revenue based upon the terms of the contract and the performance data.

A method for tracking revenue of online advertising. The method acquires contractual data pertaining to advertising campaigns, acquires performance data of the advertising campaign, and tracks revenue based upon evaluating the performance data  
10 and the contractual data.

### Detailed Description

The system is intended to be used in an online advertisement environment where various parties participate in an advertisement campaign. Typically, an  
15 advertiser of goods or services, enters into a contract with a publisher (e.g. a party that operates an ad server) to distribute ("serve") advertisements on various web site web pages at various times, and at a certain billing rate. Of course, the times, quantity of advertisements, and billing rates depend upon the agreed upon terms between the parties, which will vary from agreement to agreement. More specifically, any party  
20 (user, e.g. publisher) interested in tracking the performance of the contract would use a tracking module 40, FIG. 1, to automate the processes of monitoring contract terms, billing method, and campaign delivery and performance, in order to track and calculate recognized, actual, and deferred revenue at various times during the campaign. Tracking module 40 also automates advertiser billing workflow through  
25 module initiated scheduled billing, discrepancy reporting and resolution, data exporting, and revenue reporting.

FIG. 1 shows components of a tracking system that incorporates an embodiment of a tracking module of the present invention. The tracking system resides in a programmed general purpose computer 10 that has a database 100, a  
30 communication interface 60, a contract module 90. Computer 10 includes the ability to communicate over the Internet 70 and view data using a web browser. Operating in conjunction with the tracking system are ad server module 50, and financial module 120.

Communication interface 60 provides two way communications between  
35 computer 10, ad server module 50, financial module 120, and Internet 70. Both ad server module 50 and financial module 120 reside in general purpose computers having the capability to communicate over the Internet 70, view data in a web browser, and send/receive email .

5         Financial module 120 is a commercially available software program for generating invoices and other accounting documents. Great Plains Software Inc. offers a software program known as "Great Plains" that may be employed to realize module 120. Other commercially available software programs that can be used with tracking module 40, for example, are "Peachtree" by Peachtree Software Inc. and  
10         "QuickBooks" by Intuit Inc.

Database 100 is coupled to contract module 90 and tracking module 40 for the purpose of storing and sharing data. Contract module 90 stores contract terms and information pertaining to a particular ad campaign contract, including line item details and information pertaining to ad flight instructions for use by ad server module 50.  
15         All of the details that a user puts into a contract gets stored in database 100, via contract module 90. Tracking module 40 stores billing calculations, such as realized and deferred revenue data and other campaign billing information in database 100. Although a single database is used, multiple databases can also be implemented.

Contract module 90 captures the exact terms of an advertisement campaign  
20         through data entry by a user and stores the terms in database 100. The terms of the advertising campaign can be billing rates and periods, to name a few, which are agreed upon by the contracting parties. Some example terms are: duration of the contract, starting date, completion date, billing date(s), billing rate, which party to bill, whether to bill on time or performance, contracted performance data, and a cost  
25         model are entered into contract module 90. Contract module 90 processes the contract terms to determine a billing schedule, both of which are stored in database 100 for use by tracking module 40. The billing schedule is the period or periods that a bill is generated for the ad campaign and is dependent upon the particular contract. The billing schedule is determined by, for example, reviewing the contract start and stop  
30         dates, and billing period(s). The user also selects type of ad server that is being used in the ad campaign. This selection notifies tracking module 40 of the data format that the ad server uses. Contract module 90 is coupled to the tracking module 40 so that the modules can function and communicate with each other. Tracking module 40 is structured to receive inputs and provide output to-and-from contract module 90, or  
35         any other contract module sharing the same input/output format. Additionally, a skilled artisan could vary the inputs/outputs and format, without deviating from the spirit of the invention.

5 As mentioned above, the user enters the agreed upon cost model into contract module 90. The cost model is a type of online advertisement billing calculation method decided upon by the contracting parties when negotiating the contract. The cost model determines the metric by which performance of the contract is measured and billed. There are various types of cost models used for buying and selling online  
10 advertising. For example, cost per-thousand impressions or ad views (CPM), cost per click (CPC), and cost per-action varieties ((CPA); e.g. user registration or download on the advertiser's web site), sponsorships, and email.

Contract module 90 generates an electronic contract or "insertion order" that is transmitted to the advertiser (or its advertising agency, if any). The contract module  
15 90 captures and describes the campaigns and line items, with an amount expected due (contracted amount) for each line item and a total for the entire contract. The invoice that the publisher submits to the advertiser or its agency for payment also shows campaigns and line items with a final amount due for the line items and a total amount due for the entire contract for the current billing period. Tracking module 40  
20 calculates these amounts due. The line item amounts billed by the publisher on the invoice do not necessarily equal the "contracted due" amount of the line items on the contract, due to variations in how the ads in the campaign actually performed when the flights were called by the web publisher's ad server and published to the web site.

Contract module 90 is a conventional software program and is commercially available.  
25 Solbright Incorporated offers a software program known as "AdSales Manager" that may be employed to realize module 90. Other commercially available software programs that can be used with tracking module 40, for example, are available from Salesforce.com and Siebel Systems Inc.

Ad server module 50 hosts and manages online advertisements for web sites.  
30 Module 50 resides in a general purpose computer having the capability to communicate advertisements to various web site web pages over the Internet 70. Tracking module 40 is also capable of communicating with ad server module 50, so that the modules can function and share data with each other. One function that ad server module 50 performs is monitoring advertisement performance, for example,  
35 quantity of impressions delivered to web site web pages. This data is made available for tracking module 40, which can be shared in various ways. A user having a report or a disk with the data can directly enter the data into tracking module 40, via

5 computer 10. Additionally, tracking module 40, can communicate with ad server 50 to acquire performance data via the Internet 70. Ad server module 50 is a conventional software module. Engage, Inc. offers a software package known as "Engage AdManager" that may be employed to realize module 50.

10 Tracking module 40 is capable of communicating with ad servers having various information reporting formats. As discussed above, the user (web site publisher) indicates the type of ad server. Because there is no standard format for producing performance data, tracking module 40 must be able to convert the various ad server formats to the format common to tracking module 40. This format is a file containing ad server performance data, such as advertiser, campaign, dates, 15 impressions delivered, clicks delivered.

As mentioned earlier, ad campaigns can be structured to generate revenue in various ways. Revenue for ad campaigns that are sold and delivered as guaranteed quantities, such as ad impressions or clicks, can only be recognized upon delivery of those quantities. If payment was received for such a campaign in advance, the 20 payment must be reflected as deferred revenue and not recognized until delivery of the advertisement(s). Revenue for campaigns delivered with no quantity goals, guarantees or caps, but is instead delivered for a set time frame can only be recognized when the ad is live and that time frame has passed. To expand on the traditional methods of tracking performance for ad campaigns, tracking module 40 25 monitors contract terms, billing method, and campaign delivery and performance, in order to track and calculate recognized, actual, and deferred revenue at various times during the campaign. Tracking module 40 also automates advertiser billing workflow through module initiated scheduled billing, discrepancy reporting and resolution, data exporting, and revenue reporting.

30 In response to user selected inputs, tracking module 40 acquires performance data from ad server module 50 for use in determining actual and deferred revenue, and for reconciling contracts at the end of predetermined billing periods. Tracking module 40 also acquires data related to an approved and processed contract, and generates billable items for the contract at scheduled periods (weekly, monthly, etc). 35 Performance data from ad server module 50 is also acquired by tracking module 40, for use in these calculations.

Tracking module 40 monitors the billing dates of the contract to determine when to calculate revenue. This is achieved by checking database 100 for any contract

5 having an "event" on the current date. If a contract is found to have an "event", such  
as a billing period has ended, tracking module 40 acquires performance data  
associated with the campaign from ad server 50, and applies the appropriate  
performance metrics to the data. As mentioned above, the performance data is  
acquired one of several ways. It can be acquired automatically by tracking module 40  
10 requesting the performance data from ad server module 50. It can also be acquired  
manually by the user manually entering the performance data into a user interface of  
tracking module 40, or upload the data in file format from disk.

15 Tracking module 40 determines revenue for billing periods ranging from  
monthly (straight-lined or prorated-daily), weekly, prepay, start-of-contract, or end-  
of-contract. The billing period allows users the option to choose the date range for  
billing or invoicing the advertiser. The monthly straight-line billing period reconciles  
the contract every month, beginning in the month the first campaign begins. The  
billing amount is spread evenly across all months, regardless of the number of days in  
the month. The monthly prorated daily billing period reconciles the contract every  
20 month, beginning in the first month the campaign begins. Billing is prorated  
depending on the number of the days in the month being reconciled. The weekly  
billing period reconciles the contract every week, beginning in the week the first  
campaign begins. The prepay billing period is billed immediately after the contract is  
signed. The start of contract billing period is billed immediately upon the first day of  
25 the first campaign in the contract. The end contract billing period reconciles the  
contract and generates billing amounts upon the conclusion of all campaigns.

30 Additionally, tracking module 40 has the functionality to compile, calculate,  
and compare data from the contract within contract module 90 to data from how the  
campaign performed from ad server 50 or other data sources, as specified by contract  
module. One of these options is the "Billing Period," which determines how many  
times tracking module 40 should request data from ad server 50 or other data sources  
and how long each period for performance is meant to be. Choices for Billing Period  
may include weekly, bi-weekly, monthly pro-rated, monthly straight lined, quarterly,  
annually, etc. When either of the weekly billing periods is selected, the user must  
35 designate which day of the week represents the last day of the billing period (this is  
the week-end day). When either of the monthly billing periods is selected, the user

5 must designate which date in the month represents the last day of the billing period  
(this is the month-end day).

On the end-day of the billing period (week-end, month-end, etc), the tracking module 40 processes all the contracts which were active within the Billing Period just ended. Tracking module 40 processes those contracts depending upon the parameters  
10 and attributes of each line item of each campaign within the contract. The most important attributes of the line item that affect how the tracking module handles it include start and end dates, cost model, quantity, and cost:

Tracking module 40 tracks and monitors contract terms, billing methods, cost models, and campaign delivery and performance, in order to calculate revenue.

15 Tracking module 40 is coupled to contract module 90 and database 100, so that the modules can function, communicate, and share data with each other. Additionally, tracking module 40 communicates with ad server module 50 via the Internet 70, or by sharing a data file on a disk, or by keyboard data entry. Module 40 acquires contract term data from database 100, and advertisement performance data from ad server 50,  
20 using one of the functions described above. Included in the contract term data is a cost model that is associated with the contract being processed.

As described earlier, the cost model is a type of online advertisement payment method decided by contracting parties when negotiating a contract. There are various types of cost models used for buying and selling online advertising. For example, cost  
25 per-thousand impressions or ad views (CPM), cost per click (CPC), and cost per-action varieties (CPA), such as user registration or download on the advertiser's web site, sponsorships, and email, etc.

In preparation for revenue calculations, tracking module 40 acquires the cost model from database 100 and associates the cost model with appropriate performance  
30 metrics within tracking module 40. Because each cost model has different contractual parameters (for example, cost-per-thousand-impressions or cost-per-click) each cost model requires different calculations to determine revenue. Each cost model is defined by predetermined mathematical formulas that are used to calculate deferred  
35 and recognized revenue, based on the requirements of the contract and performance data. To give a fairly simple example: *Cost-Per-Thousand-Impressions (CPM) = (Rate x Quantity Delivered)/1000*. The "Rate" is the agreed upon billing rate for serving an advertisement. The "Quantity Delivered" can be the actual or agreed upon number of advertisements served to web site web pages, depending upon whether

5 tracking module is calculating actual revenue or contracted revenue. Tracking module  
40 applies the contract data, which is represented by variable "Rate", and the  
performance data, which is represented by variable "Quantity Delivered," to the  
metrics to determine the Cost-Per-Thousand-Impressions.

At the time of billing, tracking module 40 reconciles ad performance against  
10 contract guarantees by determining the relationship between line items which are  
booked on the contract and billed on an invoice, and flights which are scheduled in  
the ad server module 50 to meet the line item guarantee. The tracking module 40  
reconciles actual ad delivery (summation of all flights for a particular line item) to  
contracted commitment (line item guarantee from the contract). This is necessary  
15 because a campaign may be negotiated and agreed in general terms, and must be set  
up for delivery through ad server 50 in a more granular fashion, such as by an  
individual ad basis.

Additionally, tracking module 40 reconciles revenue at each billing period of  
the contract. As mentioned above, tracking module 40 monitors the billing dates of  
20 the contract by checking database 100 for any contract having an "event" on the  
current date. Using the performance metrics, contract and performance data, tracking  
module 40 calculates billable amounts and earned revenue. This revenue is the actual  
cost of the ad campaign to date, and is calculated using the method described earlier.  
It should be noted that the actual revenue may differ from the expected revenue  
25 because some advertisements may not have been posted by ad server module 50 on  
the intended web site web pages, or there may have been server failures or other  
network problems, resulting in under or over delivery. The actual revenue, for  
performance-based contracts is based upon the number of advertisements actually  
30 served through ad server module 50. The actual revenue for time-based contracts is  
based upon the ad campaign being published "live" for the committed period, in other  
words, the ad was delivered within the contracted time period.

Tracking module 40 calculates the expected revenue of the ad campaign for  
the billing cycle. The expected revenue is the contracted revenue of the ad campaign  
to date, which includes the agreed upon number of advertisements. It is calculated  
35 using the method described earlier, except the terms agreed upon in the contract are  
used in the calculations, rather than actual performance data from ad server 50. Thus,  
the difference between the expected revenue and the actual revenue will depend upon  
the difference in actual and expected performance values, or delivered time periods.

5 Tracking module 40 compares the expected revenue to the actual revenue and determines the difference, if any, line-item by line item.

If the Reconciliation Method captured on contract module 90 and stored in database 100 for access by tracking module 40 is either performance-rule or performance-to-date rule, then tracking module 40 references performance data

10 imported from ad server 50 or another data source that is measuring the performance of the line item for this advertising campaign. For performance-rule, tracking module 40 calculates the billable amount using the formula indicated by the cost model in effect on the line item, and plugging in the quantity actually delivered by ad server 50 or other data source, multiplying it by the cost defined on the line item and captured 15 on the contract in contract module 90 and stored in database 100.

For performance-to-date rule, the same calculation is performed and compared to the value that would be billed if using the contract-rule Reconciliation Method.

With performance-to-date rule, the billable amount must be less than or equal to the value calculated by tracking module 40 if contract-rule Reconciliation Method were 20 employed. Tracking module 40 calculates the billable amount up to, but not exceeding, the amount due based upon the contract alone for that billing period.

When contract-rule Reconciliation Method is in effect, at the end of the contract (defined as when the end dates for all line items for all campaigns are in the past), tracking module 40 uses performance data imported from ad server 50, or 25 another data source, to determine what revenue can be recognized in accounting system 120, and to determine whether additional performance delivery is due to the advertiser because of under delivery of the ad campaign by ad server 50 or other delivery system. “Under delivery” means that the ad server 50 or other delivery measurement system delivered or served a smaller amount (of clicks, impressions, etc.) than the line item quantity captured on the contract within contract module 90. 30 For example, the contract specified 40,000 impressions and only 38,722 impressions were served by the ad server. If a campaign under delivered, tracking module 40 communicates with database 100 and contract module 90 to have the discrepancy made up through either a “Make Good” (an online advertising industry term meaning 35 a subsequent flight or flights scheduled in publisher’s ad server 50 to deliver the quantities that are owed to the advertiser, as they were supposed to be delivered in a prior period) or a refund or credit to the advertiser’s account. Over delivered amounts

5 are ignored by tracking module 40 in terms of billable and revenue calculations; this  
is a standard practice within the online advertising industry, in which web publishers  
do not charge for delivery of advertisements over and above the amount contracted  
for by the advertiser (or its advertising agency).

10 Tracking module 40 calculates revenue that can be recognized in accounting  
module 120, based upon actual performance and/or passage of time (for sponsorships  
or other non-measured performance based contracts), regardless of which  
Reconciliation Method tracking module 40 used to generate billable amounts.

15 After reconciling contracts, tracking module 40 inserts a discrepancy item into  
a billing work queue, which is then edited as needed and approved by a user, such as  
an accountant. The billing work queue comprises a list of records resulting from the  
data reconciliation process. The discrepancy item will show any discrepancies  
between the contractual and performance data, as well as the resolutions on those  
discrepancies being performed by tracking module 40 in accordance with  
reconciliation rules originally specified for that contract. The user may approve the  
20 resolutions or edit them as needed, via tracking module 40. When approved, the final  
data as well as an audit trail of all changes are processed into a billable item and saved  
as a data file. Tracking module 40 provides for the capability of exporting the data file  
to various types of third party accounting and invoice software.

25 Before exporting the data, tracking module 40 converts the data to either a  
Comma Separated Value (CSV) or a extensible markup language (XML) format data  
file. Converting algorithms for converting raw billables data stored in the database in  
database format to CSV or XML formats are known in the art. These file formats are  
accepted by most commercially available accounting modules, such as "Peachtree" by  
Peachtree Software Inc., and "Quick Books" by Intuit Inc.

30 One example of how tracking module 40 automates the entire process of  
collecting, compiling, and calculating publisher revenues from online advertising  
campaigns is by accepting configurable parameters which guide the automated  
process. Ad server module 50 serves ads to web sites 80 and measure the performance  
of those ad campaigns. This ad server often requires a few days to complete the  
35 process of compiling data for a particular period. Tracking module 40 provides the  
functionality that the publisher may need to allow for the lag of those extra days  
before beginning the automated revenue calculations based upon contract data stored  
in database 100 from contract module 90. Tracking module 40 accommodates this

5 through a "Delay Reconciliation by \_\_\_ Days" configuration function. The user defines how many days ad server 50 is required to finish its processing and calculations, which the tracking module 40 uses to schedule the alerts and system events which are required to begin the reconciliation, compilation, calculation and comparison processes it uses to calculate billable amounts and revenue.

10 Another example of how tracking module 40 manages online advertising billing is by referencing settings on the contract from contract module 90 which indicate whether performance data monitored, measured, and calculated by a third-party ad server is used for compiling and calculating revenue within tracking module 40 (note that the third party ad server is not ad server 50). Contracts configured  
15 through contract module 90 can indicate that an ad server deployed by an advertiser (or its agency) for serving and measuring performance of the ad campaign is to be used to calculate billable amounts that the advertiser or agency gets invoiced, and revenue amounts that the publisher receives. Tracking module 40 references this configuration setting through database 100 when set up through contract module 90,  
20 and generates requests to the user for performance data from this alternate data source.

25 Tracking module 40 also functions to support the guidelines for compiling revenue consistent with generally acceptable accounting principles (GAAP). These principles require that; persuasive evidence of an arrangement exists; delivery has occurred or services have been rendered; seller's price to the buyer is fixed or determinable; and collectibility is reasonably assured. This is achieved by tracking module 40: retrieving evidence of the arrangement captured through contract module 90 and stored in database 100; retrieving proof of delivery from ad server module 50 and storing it in database 100; retrieving a seller's price from database 100, as  
30 captured by contract module 90; and accounts deemed not collectable have holds placed on them and new contracts are not accepted by contract module 90.

35 The following discussion discloses an operational schema where a web site publisher operates numerous web sites or properties (examples: Yahoo main site; Yahoo Finance; Yahoo Sports; Yahooligans for kids; Yahoo international sites for local countries; etc.) and has numerous active contracts with advertisers to distribute ("serve") advertisements the various web sites or properties.

5        A typical campaign for online advertising involves multiple ads (sometimes called “creatives”) running on multiple web sites 80 for specific dates or date ranges. Each campaign is defined on the contract (as entered into contract module 90) as one or more line items, with each line item consisting of multiple flights. Each entry of an ad scheduled to run in the publisher’s ad server 50, to be displayed on a web site 80, is  
10      called a “flight.” (Other terms also exist and are used in the online advertising industry for flight, including “placement” and “run”.) The web publisher may operate one or more of the web sites 80 running the flights of the advertiser’s campaign. The web publisher runs multiple campaigns (with multiple flights in each) concurrently for multiple advertisers, often including multiple campaigns from any one advertiser.

15       To illustrate, a web publisher such as Yahoo! or AOL operates numerous separate web sites or properties. The publisher has hundreds or thousands of advertisers with active contracts at any given time. Each advertiser may have multiple campaigns running (e.g., Ford Motor Company may run separate ad campaigns for their sport utility vehicle and for their compact cars simultaneously, each with  
20      separate branding messages, separate advertisements or “creatives,” and may even employ different advertising agencies to purchase ad space and manage the campaigns, etc.). Each advertiser has its campaign running on one or more of the sites the publisher owns and operates, and the advertiser also has the campaign running on other sites that are not owned and operated by the publisher.

25       Therefore, each publisher using tracking module 40, contract module 90, ad server module 50 and web site 80 has thousands of flights running thousands of ads on thousands of web pages. This is a very large amount of information to track, monitor, compile, calculate and compare, which, if left to a user to perform manually, would overwhelm the user and would inevitably result in errors in compiling and  
30      calculating the performance data and associated revenue for billing and reporting purposes. Advantageously, tracking module 40 monitors the terms of the line items on the contract as communicated by contract module 90 to database 100, and alerts a user (publisher) when performance data is required to be imported from ad server 50 or from another data source, and compares the aggregated performance of the flights to  
35      the line item quantity commitment sold on the contract and captured within contract module 90, determining the difference, if any, line item by line item.

5 Referring to FIG. 2, tracking module 40 acquires contract data from database  
100, which was captured by contract module 90 (Block 200). Online advertising  
contracts are negotiated by defining the terms under which the advertising campaign  
will run and how and when the advertiser's ads will appear on the pages of the  
publisher's web site 80. (Ads appear on web sites 80 when served or published by ad  
10 server 50.) The publisher uses contract module 90 to capture the details as agreed  
upon with the advertiser (or its advertising agency if one is being used), including  
dates to run the campaign(s), web sites 80 to run on, targeting criteria to direct the ads  
at a particular demographic audience (which may include time of day or day of week  
that ad is displayed on publisher's web site, age or sex of viewer of the ad on the web  
15 page, type of computer equipment being used by viewer of the ad, interests of viewer,  
etc.), cost model (performance metric, such as CPM for impressions, CPC for clicks,  
CPA for actions, etc.), quantity to be delivered, and the cost for each unit of  
performance.

These details are keyed into the contract module 90 and stored in database 100  
20 to be available for reconciliation within tracking module 40. The campaign details on  
the contract are referred to as "line items." These line items define the obligation of  
the publisher to publish or "serve" the online ads on behalf of the advertiser, in  
exchange for the agreed price of the line item on the contract. The price is calculated  
by the contract module 90 using the cost model chosen by the user of contract module  
25 90, such as CPM for an impressions-based line item (sold, measured, and billed by  
how many ad views or "impressions" were delivered by the publisher's ad server to  
the pages of the publisher's web site), CPC for a clicks-based line item (sold,  
measured, and billed by how many viewers of the ad clicked on that ad when it was  
displayed on the publisher's web site), CPA for actions (sold, measured, and billed by  
30 how many viewers of the ad performed an action defined by the advertiser in advance,  
such as downloading a digital asset such as software from the advertiser's web site, or  
registering as a new member on the advertiser's web site); etc.

Online advertising contracts are sometimes referred to as "insertion orders" or  
"IOs" which is a term from traditional advertising (e.g., magazine publishing, wherein  
35 the advertiser's ad or "creative" was "inserted" into the copy or pages within the  
magazine). Each line item on the contract entered through the contract module 90  
represents one component or element of an advertising campaign. Each contract

5 within contract module 90 has one or more campaigns, with one or more line items in each campaign.

When the contract is agreed upon between the publisher and the advertiser or its agency, the advertiser or its agency submits the ads to the publisher. The publisher sets up or configures the way the ads will appear on the pages of its web site(s) by 10 creating a campaign in the ad server 50. Each campaign entered on the contract within contract module 90 becomes a campaign running within the publisher's ad server 50. Each line item entered on the contract within contract module 90 is broken down into one or more ad placements or "flights" which have one or more ads attached and which are set up within the publisher's ad server 50 to be displayed on the pages of 15 the publisher's web site 80.

At block 210, tracking module 40 uses the line item dates to identify whether the line item began and ended in the current billing period, or if it was carried over from the previous period, and/or if it will carry over to the next period, to determine quantities delivered. If the line item was to completely perform within the current 20 period, then the tracking module 40 adds up the total quantity delivered by the flights comprising that line item and compares that total to the line item quantity on the contract within contract module 90. If the line item was carried over from the previous period, then tracking module 40 accesses status information for the line item from all prior billing periods stored in database 100 and determines if any quantities 25 delivered in prior periods are to be carried over and combined with the quantities delivered in the current period, by the flights that comprise the line item. Similarly, tracking module 40 checks to see if the line item will continue in the next subsequent period to determine if any quantities delivered in the current billing period that exceed the quantity that was expected to be delivered for this period based on the line item on 30 the contract within contract module 90, can be carried over to the next billing period.

At block 220, tracking module 40 uses a cost model to determine how to handle the reconciliation of that line item against the flights that comprise it. The cost model indicates whether the line item is being measured by impressions (ad views published by the ad server 50 and displayed to a viewer on the publisher's web site 35 80), by clicks (number of times viewers of the ad clicked on it), or by other viewer actions, as specified by the advertiser to measure. Tracking module 40 determines

5 which formula to use for calculating the total revenue due from the line item based on the cost model, and calculates total revenue due, block 230.

At block 240, tracking module 40 uses line item quantity data from the contract module 90 to calculate billable amounts for contracts designated within contract module 90 as using contract-rule reconciliation method, and to determine if 10 the line item met delivery requirements for the billing period. Tracking module 40 uses line item cost from the contract module 90 to calculate billable amounts for all contracts, regardless of reconciliation method employed on the contract.

Three reconciliation rules are applied to each contract during the reconciliation process: contract-rule, performance-rule, and performance-to-date-rule. Contract-rule 15 requires billing on 100 percent delivery rate. At the end of the billing period or contract depending on the billing period, the performance is reconciled against the contract to determine the difference between what is being billed and the actual. Performance-rule, calls for billing solely on delivery up to the maximum dollar amount for any line item. At the end of the billing period or contract depending on the 20 billing period, the contract will be reconciled against performance data to determine the difference between what is being billed and what was expected to be billed. Performance-to-date rule, requires billing based on delivery up to the maximum dollar amount expected for any line item up through the end of the current billing period being billed. Discrepancies are resolved per the reconciliation rules in effect for the 25 contract.

For each contract that is active during the Billing Period that tracking module 40 is processing, tracking module 40 calculates the billable amount for each line item, which is the amount due that will appear as a line item on the invoice generated by accounting module 120. This billable amount is transmitted to the accounting module 30 120 by tracking module 40 through the Export process (described later). Tracking module 40 calculates the billable amount for the Billing Period by first identifying the Reconciliation Method selected on the contract through contract module 90. If the contract-rule Reconciliation Method is in effect, then tracking module 40 determines the billable amount for this Billing Period by dividing the line item amount on the 35 contract by the number of billing periods in which the line item ran or is running.

For example, if a line item is sold for 30 days from June 15 to July 14 and the Billing Period is monthly straight line, then the line item is active in two distinct

5 billing periods, the first billing period being 6/15 – 6/30 and the second being 7/1-  
7/14. If the line item amount on the contract is \$1,000 (40,000 impressions sold at \$25  
CPM cost model, or  $40,000 \times \$25 / 1000$ ), then tracking module 40 determines that  
the contracted amount due for each Billing Period is \$500 using the contract-rule  
Reconciliation Method.

10 Once a discrepancy has been approved, as described earlier, the data from that  
discrepancy becomes a “Billable.” A “Billable,” is an item that may be acted upon  
and billed to an advertiser by the publisher. It holds all the relevant data necessary to  
create an invoice for the period in question. One use of a “Billable” is to be exported  
to financial module120 for further processing into an invoice that can be sent to the  
15 advertiser.

At block 250, tracking module 40 exports the “Billable” to a third party  
billing system of their choice. This allows users who have legacy billing systems  
(which may also act as the billing system for other segments of the users’ company)  
to continue using those systems for all product lines, including tracking module 40.

20 The billables data file is communicated from tracking module 40 to financial  
module120. The final data comprises advertiser, campaign, billing period (dates), and  
billing amount. The data is exported to financial module120 by either file transfer  
over the Internet 70, or by disk, or by manual data entry.

25 Tracking module 40 exports billables data to financial module120 for use in  
generating invoices for ad campaigns. Module 40 exports a file that can be imported  
into financial module120, where the file can be stored and further processed. Once  
exported to financial module120, the file can be opened and read, printed, formatted,  
and transferred into commercial software such as the spreadsheet program Microsoft  
Excel or an accounting package such as Oracle Financials, for generating an invoice.

30 The above presents various principles and features of the invention through a  
description of a particular embodiment. It is understood that skilled artisans can make  
various changes and modifications to the embodiment without departing from the  
spirit and scope of this invention, which is defined by the following claims.

To illustrate, the above discussion is couched in terms of a network  
35 arrangement with the various modules interacting with each other over the network. It  
is clear, however, that the modules can be located in a single computer system, or that  
they can be combined to form larger modules that perform combined functions.

**Claims:**

1. A method of tracking revenue from an online advertising campaign comprising:  
acquiring contractual data pertaining to the advertising campaign;  
acquiring performance data of the advertising campaign; and  
tracking revenue based upon evaluating the performance data and the contractual data.
2. The method of claim 1 wherein the performance data is capable of being acquired from sources of various formats.
3. The method of claim 1 wherein a tracking period is determined by the contractual data.
4. The method of claim 3 wherein the tracking period is daily, weekly, monthly, or quarterly.
5. The method of claim 1 wherein the revenue is deferred.
6. The method of claim 1 wherein the revenue is recognized.
7. The method of claim 1 further comprising compiling revenue consistent with generally acceptable accounting principles.
8. The method of claim 7 further comprising transferring revenue to an accounting program.
9. The method of claim 8 wherein the accounting program is consistent with generally acceptable accounting principles.
10. The method of claim 1 wherein performance data is capable of being acquired from sources of various formats.

**11.** The method of claim 1 further comprising generating billable amounts from tracking revenue for import into financial management systems for invoicing and accounting.

**12.** A system comprising:

means for acquiring contractual data pertaining to an advertising campaign; means for acquiring performance data of the advertising campaign; and means for tracking revenue based upon evaluating the performance data and the contractual data.

**13.** The system of claim 12 wherein the means for acquiring performance data is capable of being acquired from sources of various formats.

**14.** The system of claim 12 further comprising a means for producing an invoice based upon evaluating the performance data and the contractual data.

**15.** The system of claim 12 further comprising means for generating billable amounts, from tracking revenue, using generally acceptable accounting principles.

**16.** The system of claim 15 further comprising means for exporting billable amounts into financial management systems.

**17.** The system of claim 16 wherein the financial management systems are of various formats.

**18.** The system of claim 12 further comprising means for producing invoice data in a format capable of interacting with various financial accounting systems.

**19.** A server comprising:

a contract module for capturing terms of a contract;  
a database for storing the terms of the contract and performance data; and  
a tracking module for calculating revenue based upon the terms of the contract and the performance data.

**20.** The server of claim 19 further comprising a communication interface for providing two way communications between the server and at least one second server, over a computer network.

**21.** The server of claim 20 wherein the computer network is the Internet.

**22.** The server of claim 20 wherein the second server is an advertisement server.

**23.** The server of claim 20 wherein the second server is capable of generating invoices.

**24.** A method of tracking revenue from an online advertising campaign comprising:  
receiving data related to contracts and quantities of advertisements delivered; and  
tracking revenue based upon evaluating the performance data and the contractual data.

FIG. 1

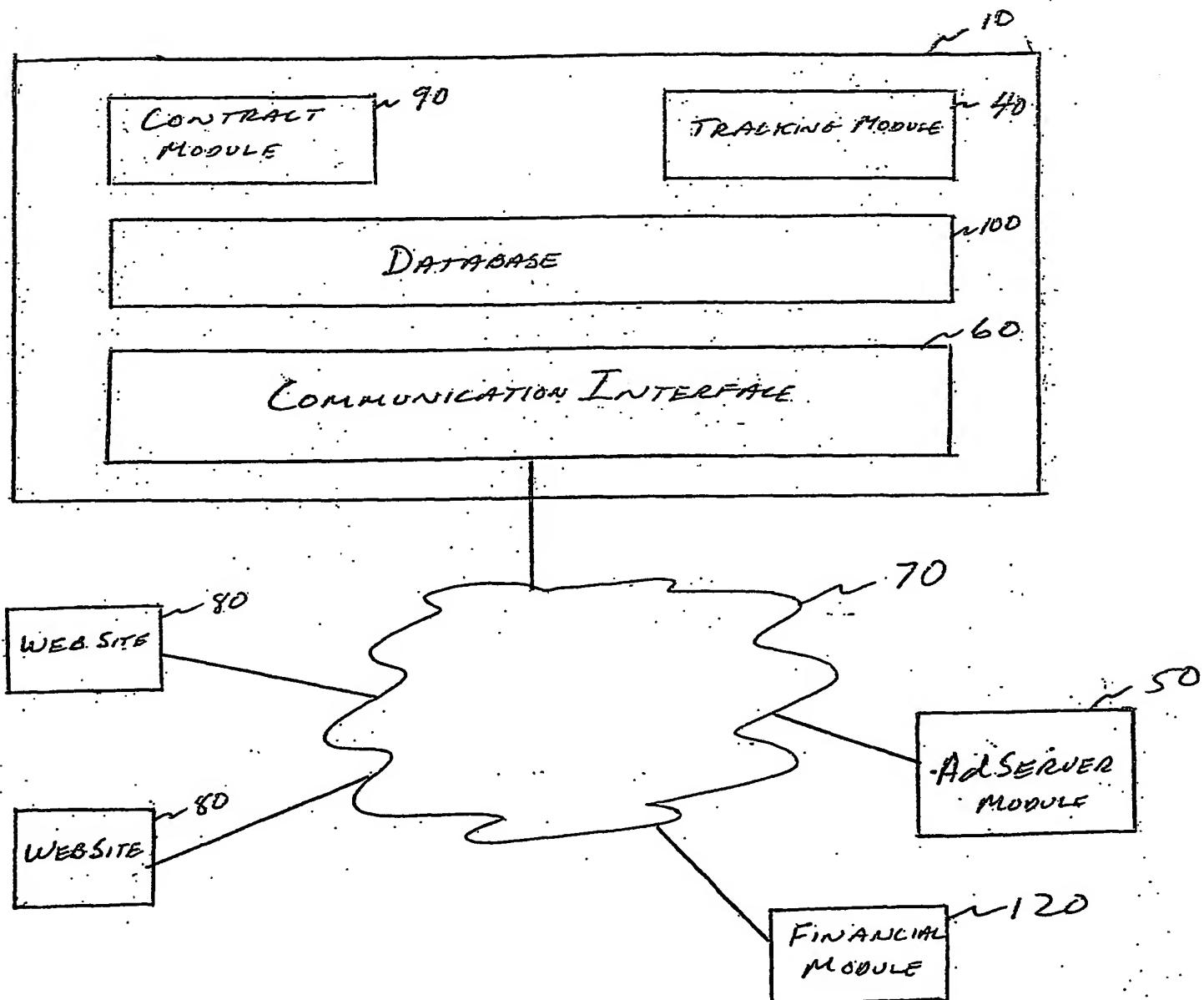
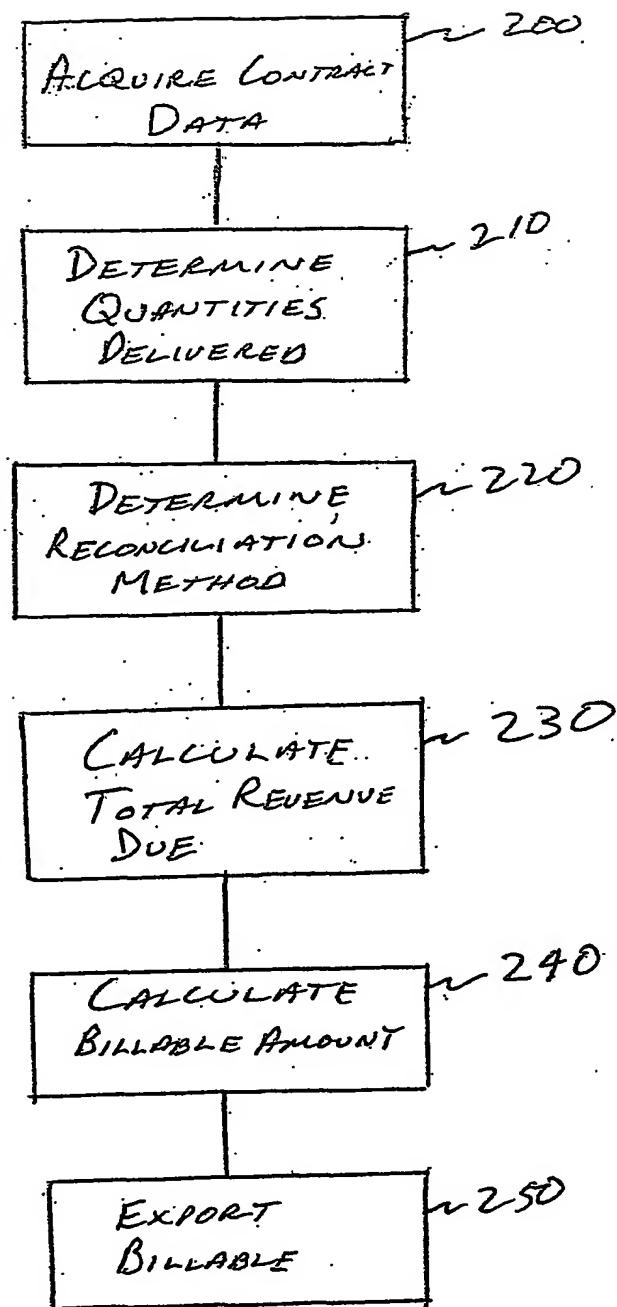


FIG. 2.



**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

**BLACK BORDERS**

**IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**

**FADED TEXT OR DRAWING**

**BLURRED OR ILLEGIBLE TEXT OR DRAWING**

**SKEWED/SLANTED IMAGES**

**COLOR OR BLACK AND WHITE PHOTOGRAPHS**

**GRAY SCALE DOCUMENTS**

**LINES OR MARKS ON ORIGINAL DOCUMENT**

**REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**

**OTHER:** \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**